

May 22, 2013

Mr. David Young
California Regional Water Quality Control Board
Los Angeles Region
Site Cleanup Program
320 West 4<sup>th</sup> Street, Suite 200
Los Angeles, California 90013

Indoor Air Sampling Report Spring 2013

Continental Heat Treating

10643 Norwalk Boulevard, Santa Fe Springs, California
(Site Id. No. 204GW00, SCP No. 1057)

Dear Mr. Young:

Fero Environmental Engineering, Inc. (Fero) conducted the second round of indoor air sampling (Spring Event) at the subject site ("Site") on April 22-23, 2013. The sampling was conducted consistent with Fero's Additional Subsurface Work Plan, Continental Heat Treating, 10643 Norwalk Boulevard, Santa Fe Springs, California (Site Id. No. 204GW00. SCP No. 1057) ("Work Plan"), dated April 13, 2012 and the Los Angeles Regional Water Quality Control Board's (RWQCB), Approval of Work Plan for Additional Subsurface Investigation and Indoor Air Sampling Pursuant to California Water Code Section 13267 Order ("Approval"), dated May 14, 2012.

#### **Indoor Vapor Sampling**

As discussed in the Work Plan, Fero conducted indoor air sampling at the Site consistent with the Department of Toxic Substances Control, *Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* (Guidance), dated October 2011. Prior to conducting the sampling, a Building Survey Form (Appendix L of the Guidance) was completed to denote time, date, sample location, sample identification number, and weather conditions. A copy of the completed Building Survey Form is included as Attachment A. Current operations at the Site do not use the compounds of concern ("COCs") such as tetrachloroethylene ("PCE") or any other chlorinate ethenes. The sampling was conducted under typical operating conditions for the facility including heating and ventilation operation and ingress and egress activities.

Five canisters were placed inside the building space and three were placed outdoors. In compliance with the Guidance, the indoor canisters collected air samples from the recommended standard breathing height for an adult of 3 to 5 feet off the floor within the office space and work area and the outdoor air samplers were placed at 6 feet above grade. The canisters were located at the same

sampling locations used during the prior fall monitoring event. The sampling locations are indicated on Figure 1.

The outdoor air samples were collected from upwind locations and the sampling locations were located away from gasoline stations, automobiles, gas powered engines, fuel and oil storage tanks, and chemical storage areas. The outdoor canisters were located at least 10 feet beyond tree drip lines at a distance twice that of the building height with exception to the sample located in the northeast corner of the site (#3141). The drip line requirement was achieved when installing canister #3141 however, there was no safe place to leave the canister at or beyond two building heights from the building. That canister was placed as far northeast on the property as practical.

The samples were collected over a period of 24 hours in 6 liter SUMMA canisters fitted with flow control regulators that were calibrated by Air Technology Laboratories, Inc. ("ATL") located at 18501 E. Gale Avenue, Suite 130 in the City of Industry, California 91748. Fero secured the SUMMA canisters at their respective sampling locations (indicated on Figure 1) on April 22, 2013. Once the sampling canisters were placed, the sampling valves were all opened sequentially starting at 10:48 a.m. with the first canister and ending at 11:03 a.m. with the last canister. On April 23, 2013, Fero returned to the Site 24 hours after canister installation and sequentially closed all the valves in the order they were opened and collected the canisters. The initial vacuum in each canister was 29-30" Hg and, as desired, each of the canisters was still under a slight vacuum (3-5" Hg) upon retrieval.

The sample canisters were immediately placed in transport boxes and delivered for analysis to ATL accompanied by appropriate Chain-of-Custody documentation for analysis. ATL analyzed the air samples using the selective ion mode ("SIM") detector and EPA Method TO15 to achieve detection limits for evaluation using the California Human Health Screening Levels ("CHHSLs") from the California Environmental Protection Agency for indoor air samples. Air VOC analytical results from this event are summarized along with the prior sampling event in Table 1. The first five pairs of canisters listed in Table 1 were located inside the onsite building with each pair located at the same locations. The last three pairs of canisters (in bold) were located outside the building at the same "background" locations for each pair. Applicable CHHSLs and Acute and Chronic Reference Exposure Levels ("RELs") from the California Office of Environmental Health Hazard Assessment ("OEHHA"), dated December 18, 2008 are reported at the top of Table 1. Laboratory analytical reports with QA/QC and associated chain-of-custody documentation are attached hereto as Attachment B.

#### **Conclusions**

ATL reported the concentrations of 29 COCs on its list of EPA Method TO15 SIM analytes. Sixteen of those analytes occurred at or above the compound's respective reportable limit. Two analytes identified during the fall sampling event (Chloroethane and 1,1,1-Trichloroethane) were not detected above laboratory detection limits during this sampling event. Table 1 summarizes the concentrations of the compounds identified in the SUMMA canisters used for this and for the prior sampling events. All of the COCs in Table 1 occurred at comparable concentrations in both the indoor and outdoor samples and the concentrations were all comparable to or lower than the values reported at the same locations during the fall sampling event. Three compounds (carbon tetrachloride, benzene and

tetrachloroethylene) were detected at concentrations that exceeded their respective CHHSLs in indoor and outdoor or background samples. All of the compounds detected inside and outside were well below their respective acute and chronic RELs which are provided on Table 1 for comparison. As indicated in the Guidance, the OEHHA chronic REL values are, "designed to address continuous exposure for up to a lifetime: the exposure metric used is the annual average exposure". The concentrations reported for COCs in air samples within and outside of the buildings of the Site do not represent an unacceptable risk to Site occupants above background for the area of the Site. No further indoor air monitoring is needed.

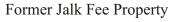
Should you have any questions regarding the content of this Indoor Air Sampling Report, please do not hesitate to call the undersigned at (714) 256-2737.

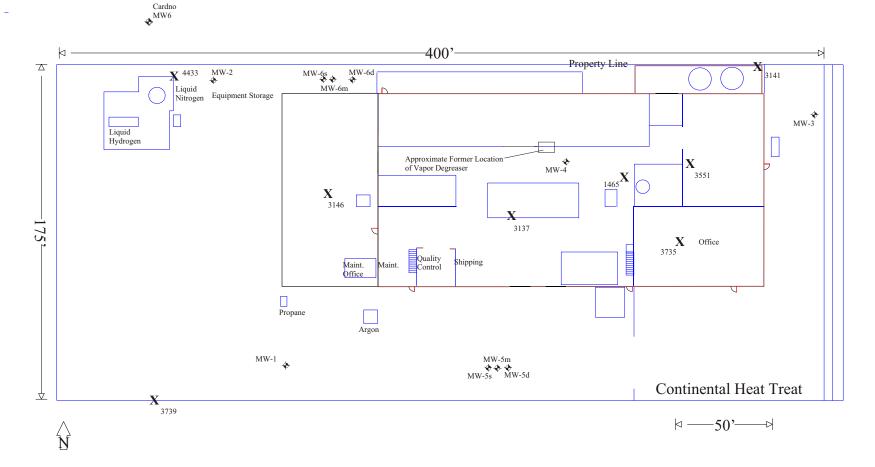
Respectfully,

Fero Environmental Engineering, Inc.

Rick L. Fero, P.P.O. President Exp.

RLF: slf [758IndoorAirSampRpt413]





## Legend

- - Groundwater Monitoring Well
- **X** Summa Canister Sampling Locations



**Summa Canister Locations** Continental Heat Treating, Inc. (4/22/2013)
10643 South Norwalk Boulevard

Santa Fe Springs, California

Base Map Source: Trilogy Regulatory Services

[758Summa413]

Figure 1

Norwalk Boulevard

**Table 1**Summary of Air Analyses

# **Continental Heat Treating**

10643 Norwalk Boulevard, Santa Fe Springs, California (Site Id. No. 204GW00, SCP No. 1057)

 $(\mu g/m3)$ 

Exposure Levels DO	CFM	ChlM	ChlE	TCFM	Freon	MCl	DCE	ChlF	TCA	CTet	Benzene	DCA	TCE	Toluene	PCE	EBen	Xylenes	Styrene
CHHSLs (Ind) Acute RELs Chronic RELs Reporting Limit	  0.049	  0.021	  0.026	   0.11	  0.15	14,000 400 0.17	51.1  0.04	150 300 0.049	3,210  0.055	0.09 1,900 40 0.063	0.14 1,300 60 0.16	0.19   0.04	2.04  600 0.054	438 37,000 300 0.075	0.693 20,000 35 0.068	2,000 0.087	1,020 2,200 700 0.087	21,000  0.085
Canister#Date DO	CFM	ChlM	ChlE	TCFM	Freon	MCl	c-1,2- DCE	ChlF	1,1,1- TCA	CTet	Benzene	1,2 - DCA	TCE	Toluene	PCE	EBen	Xylenes	Styrene
	2.5	1.3	ND	1.4	0.64	1.2	0.071	0.38	0.15	0.59	6.0	0.13	0.37	11	3.8	1.6	9.4	1.2
	2.3	1.1	ND	1.1	0.64	0.35	0.1	0.11	J	0.42	7.9	ND	0.31	1.4	9.4	0.24	1.33	0.3
	2.5	1.2	ND	1.3	0.63	1.2	ND	0.38	0.13	0.57	6.0	0.11	0.27	11	0.73	1.4	8.3	1.2
	2.4	1.2	ND	1.1	0.65	0.36	0.048	0.1	J	0.42	7.3	0.069	0.11	1.2	1.1	0.2	1.04	0.62
	2.5	1.4	ND	1.3	0.65	1.4	ND	0.41	0.13	0.59	3.9	0.15	0.31	11	0.73	1.5	8.7	4.5
	2.4	1.4	J	1.1	0.66	0.38	ND	1.3	J	0.44	0.97	0.095	0.065	2.1	2.1	0.48	3.3	2.9
	2.6	1.7	0.038	1.3	0.64	1.2	ND	0.38	0.13	0.58	3.7	0.12	0.28	11	0.42	1.4	8.2	1.1
	2.4	1.2	ND	1.1	0.65	0.36	J	0.87	J	0.44	5.2	0.062	0.099	1.4	0.55	0.19	0.96	0.2
	2.5	1.3	ND	1.4	0.64	1.2	ND	0.35	0.12	0.57	3.2	0.13	0.27	10	0.51	1.3	8.4	1.2
	2.4	1.2	J	1.1	0.65	0.36	J	0.087	J	0.43	1.8	0.065	0.087	0.93	0.51	0.15	0.87	0.13
	2.6	1.3	ND	1.4	0.65	1.2	ND	0.37	0.17	0.59	3.1	0.12	0.23	12	0.39	1.6	9.9	1.1
	2.5	1.2	J	1.2	0.67	0.35	ND	0.10	J	0.43	0.64	0.067	J	1.2	0.14	0.22	1.24	0.16
	2.6	1.3	0.027	1.4	0.66	1.2	ND	0.37	0.13	0.59	2.9	0.15	0.26	10	1.2	1.4	8.7	1.0
	2.4	1.2	J	1.1	0.65	0.36	ND	0.089	J	0.43	0.45	0.065	0.073	0.74	0.50	0.15	0.74	0.092
	2.8	1.5	ND	1.4	0.62	1.3	ND	0.36	0.11	0.59	2.8	0.14	0.28	11	0.40	1.4	8.5	1.0
	2.4	1.2	J	1.1	0.65	0.37	ND	0.11	J	0.43	0.44	0.063	0.077	0.76	0.12	0.15	0.8	<u>J</u>

CHHSLs-California Human Health Screening Levels, RELs- Reference Exposure Levels from the Office of Environmental Health Hazard Assessment (OEHHA), ND = Not Detected at Reporting Level DCFM – Dichlorodifluoromethane (12), ChlM - Chloromethane, ChlE- Chlorofluoromethane, Freon-1,1,2-Cl 1,2,2-F ethane (113), MCl – Methylene Chloride, DCE- c-1,2-Dichloroethane ChlF – Chloroform, 1,1,1-TCA-1,1,1—Trichloroethane, CTet- Carbon Tetrachloride, DCA-1,2-Dichloroethane, TCE- Trichloroethene, PCE- Tetrachloroethene, EBen- Ethylbenzene

Note: Bottom three canisters in bold on the Table were located outside (background samples)

# ATTACHMENT A

Building Survey Form

APPENDIX L - BUILDING SUR	
Preparer's Name: John Petersen Affiliation: Fero Engineering	Date/Time Prepared: 4 - 22 - 13 / Phone Number: 7 14 256 27/37
Occupant Information	
Occupant Name: Continental Heat Treat Mailing Address: 10643 S. Norwalk Blud. City: Santa Fe Springs State: CA Phone: 562 944 8868 Email: JC	Zip Code: 90670
Owner/Landlord Information (Check if same as occupant $\square$ )	
Occupant Name: Continental Heat Treating Mailing Address: 10643 5. Norwalk Blvd.  City: Santa Fe Springs State: CP Phone: 562 944 8808 Email: JC	,
Building Type (Check appropriate boxes)	,
☐ Residential ☐ Residential Duplex ☐ Apartment Building ☐ Commercial (warehouse) ☐ Industrial ☐ Strip Mall ☐ Sp	☐ Mobile Home ☐ Commercial (office)
Building Characteristics	
Approximate Building Age (years): 43 Number Approximate Building Area (square feet): 28000	er of Stories:
Foundation Type (Check appropriate boxes)	
☑ Slab-on-Grade □ Crawl Space □ Basement	
Basement Characteristics (Check appropriate boxes)	
□ Dirt Floor □ Sealed □ Wet Surfaces □ Sump Pump □	Concrete Cracks
Factors Influencing Indoor Air Quality	
Is there an attached garage? Is there smoking in the building? Is there new carpet or furniture? Have clothes or drapes been recently dry cleaned? Has painting or staining been done with the last six months? Has the building been recently remodeled? Has the building ever had a fire? Is there a hobby or craft area in the building? Is gun cleaner stored in the building? Is there a fuel oil tank on the property? Is there a septic tank on the property? Has the building been fumigated or sprayed for pests recently? Do any building occupants use solvents at work?	☐ Yes       No         ☐ Yes       No

SEE ATTACHED FIBURE

### **Sampling Locations**

Draw the general floor plan of the building and denote locations of sample collection. Indicate locations of doors, windows, indoor air contaminant sources and field instrument readings.

Primary Type of Energy Used (Check appropriate boxes)	ı
✓ Natural Gas ☐ Fuel Oil ☐ Propane ☐ Electricity ☐ Wood ☐ Kerosene	
Meteorological Conditions	
Describe the general weather conditions during the indoor air sampling event.  The Clean Some Wind 3mph WSW / pick up 72° Cleanson  General Comments	iny wond
General Comments  Provide any other information that may be of importance in understanding the indoor air quality of thi building.	s
	- - -

# ATTACHMENT B

Air Technology Laboratory Report

May 5, 2013



ADE-1461 EPA Methods TO-3, TO14A,TO15 SIM & Scan, ASTM D1946



LA Cert 04140 EPA Methods TO3, TO14A, TO15, 25C/3C, RSK-175

TX Cert T104704450-09-TX EPA Methods T014A, T015

Fero Environmental Engineering, Inc. ATTN: John Petersen 431 W. Lambert Rd., Suite 305 Brea, CA 92821

### LABORATORY TEST RESULTS

Project Reference: Continental Heat Treating; 10-758

Lab Number: E042310-01/08

Enclosed are results for sample(s) received 4/23/13 by Air Technology Laboratories. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

### Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the NELAC Standards.
- The enclosed results relate only to the sample(s).

Results were e-mailed to John Petersen on 5/02/13.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

Mark Johnson

Operations Manager

MJohnson@AirTechLabs.com

Note: The cover letter is an integral part of this analytical report.

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		Fx: 626-964-5832	Same Day	72 hours		EDF	Sealed Yes	□ %
Project No.: 10	10-158		24 hours	96 hours		LEVEL 3	Intact Yes	□ %
 6:	Continental Heat	Treating	Other:			LEVEL 4	Chilled	deg C
	Fero Engineering	9 John Petersen	BI	BILLING		A	ANALYSIS REQUEST	
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RELINGUISHED BY		D> 4/2	DATENTIME (31)					
RELINCUISHED BY			ATE/TIME					
RELINQUISHED BY	DATE/TIME	RECEIVED BY DA	DATE/TIME					

Preservation: H=HCL N=None / Container: B=Bag C=Can V=VOA O=Other Rev. 03 - 5/7/09

 METHOD OF TRANSPORT (circle one):
 Walk-In
 FedEx
 UPS
 Courier
 ATLI
 Other

 DISTRIBUTION:
 White & Yellow - Lab Copies / Pink - Customer Copy
 Pre

Page 2 of 5 E042310

Client:

Fero Engineering

Attn:

John Petersen

**Project Name:** 

**Continental Heat Treating** 

Project No.: Date Received:

10-758 04/23/13

Matrix:

Air Reporting Units: ug/m3

**EPA Method TO15 SIM** 

			EP.	A Method	1015 8	IM						
Lab No.:	E0	42310-01	1	E0	42310-02	2	E0	42310-03	3	E0	42310-04	ļ
Client Sample I.D.:		3141			3551			1465			3735	
Date Sampled:	0	4/22/13		(	04/22/13		(	)4/22/13		0	4/22/13	
Date Analyzed:	0	4/24/13		(	04/24/13		(	)4/24/13		0	4/24/13	
QC Batch No.:	1304	423MS2A	<b>A</b> 1	1304	423MS2	<b>A1</b>	130	423MS2A	41	1304	423MS2A	11
Analyst Initials:		DT			DT			DT			DT	
Dilution Factor:		1.0			1.0			1.0			1.0	
	Result	RL	MDL	Result	RL	MDL	Result	RL	MDL	Result	RL	MDL
ANALYTE	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Dichlorodifluoromethane (12)	2.5	0.049	0.0023	2.3	0.049	0.0023	2.4	0.049	0.0023	2.4	0.049	0.0023
Chloromethane	1.2	0.021	0.0050	1.1	0.021	0.0050	1.2	0.021	0.0050	1.4	0.021	0.0050
Vinyl Chloride	ND	0.013	0.0044	ND	0.013	0.0044	0.0082 J	0.013	0.0044	ND	0.013	0.0044
Chloroethane	0.019 J	0.026	0.0051	ND	0.026	0.0051	ND	0.026	0.0051	0.0076 J	0.026	0.0051
Trichlorofluoromethane (11)	1.2	0.11	0.0030	1.1	0.11	0.0030	1.1	0.11	0.0030	1.1	0.11	0.0030
1,1,2-Cl 1,2,2-F ethane (113)	0.67	0.15	0.0026	0.64	0.15	0.0026	0.65	0.15	0.0026	0.66	0.15	0.0026
1,1-Dichloroethene	ND	0.020	0.0031	0.0086 J	0.020	0.0031	0.019 J	0.020	0.0031	0.0045 J	0.020	0.0031
Methylene Chloride	0.35	0.17	0.0077	0.35	0.17	0.0077	0.36	0.17	0.0077	0.38	0.17	0.0077
t-1,2-Dichloroethene	0.0089 J	0.040	0.0035	0.011 J	0.040	0.0035	0.0097 J	0.040	0.0035	0.0077 J	0.040	0.0035
1,1-Dichloroethane	0.0042 J	0.040	0.0025	0.0049 J	0.040	0.0025	ND	0.040	0.0025	0.0039 J	0.040	0.0025
c-1,2-Dichloroethene	ND	0.040	0.0039	0.10	0.040	0.0039	0.048	0.040	0.0039	ND	0.040	0.0039
Chloroform	0.10	0.049	0.0030	0.11	0.049	0.0030	0.10	0.049	0.0030	1.3	0.049	0.0030
1,1,1-Trichloroethane	0.024 J	0.055	0.0024	0.028 J	0.055	0.0024	0.031 J	0.055	0.0024	0.025 J	0.055	0.0024
Carbon Tetrachloride	0.43	0.063	0.0021	0.42	0.063	0.0021	0.42	0.063	0.0021	0.44	0.063	0.0021
Benzene	0.64	0.16	0.018	7.9	0.16	0.018	7.3	0.16	0.018	0.97	0.16	0.018
1,2-Dichloroethane	0.067	0.040	0.0046	ND	0.040	0.0046	0.069	0.040	0.0046	0.095	0.040	0.0046
Trichloroethene	0.035 J	0.054	0.0042	0.31	0.054	0.0042	0.11	0.054	0.0042	0.065	0.054	0.0042
1,2-Dichloropropane	0.025 J	0.092	0.0055	0.049 J	0.092	0.0055	0.055 J	0.092	0.0055	0.025 J	0.092	0.0055
Bromodichloromethane	0.0077 J	0.067	0.0041	0.0053 J	0.067	0.0041	ND	0.067	0.0041	0.074	0.067	0.0041
Toluene	1.2	0.075	0.0060	1.4	0.075	0.0060	1.2	0.075	0.0060	2.1	0.075	0.0060
t-1,3-Dichloropropene	ND	0.045	0.0044	ND	0.045	0.0044	ND	0.045	0.0044	0.014 J	0.045	0.0044
1,1,2-Trichloroethane	ND	0.055	0.0087	ND	0.055	0.0087	ND	0.055	0.0087	ND	0.055	0.0087
Tetrachloroethene	0.14	0.068	0.033	9.4	0.068	0.033	1.1	0.068	0.033	2.1	0.068	0.033
1,2-Dibromoethane	ND	0.15	0.0028	ND	0.15	0.0028	ND	0.15	0.0028	ND	0.15	0.0028
Ethylbenzene	0.22	0.087	0.0030	0.24	0.087	0.0030	0.20	0.087	0.0030	0.48	0.087	0.0030
p,&m-Xylene	0.86	0.087	0.0085	0.92	0.087	0.0085	0.72	0.087	0.0085	1.8	0.087	0.0085
o-Xylene	0.38	0.087	0.0056	0.41	0.087	0.0056	0.32	0.087	0.0056	1.5	0.087	0.0056
Styrene	0.16	0.085	0.0062	0.30	0.085	0.0062	0.62	0.085	0.0062	2.9	0.085	0.0062
1,1,2,2-Tetrachloroethane	ND	0.14	0.0012	ND	0.14	0.0012	ND	0.14	0.0012	ND	0.14	0.0012

MDL = Method Detection Limit

ND= Not Detected (below MDL)

RL = Reporting Limit

J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By:

Operations Manager

Date\_\_\_\_\_

The cover letter is an integral part of this analytical report

page 1 of 1

Client:

Fero Engineering

Attn:

John Petersen

Project Name:

**Continental Heat Treating** 

Project No.: Date Received:

10-758 04/23/13

Air

Matrix: Reporting Units: ug/m3

# **EPA Method TO15 SIM**

Lab No.:	E0	42310-05	5	E0	42310-06	5	E0	42310-07	7	E0	42310-08	3
Client Sample I.D.:		3137			2008			4433			3739	
Date Sampled:	(	04/22/13		(	)4/22/13		(	04/22/13		(	4/22/13	
Date Analyzed:	(	)4/24/13		(	)4/24/13		(	)4/24/13		0	4/24/13	
QC Batch No.:	1304	423MS2A	11	130-	423MS2A	<b>A</b> 1	130-	423MS2A	11	1304	423MS2A	11
Analyst Initials:		DT			DT			DT			DT	
Dilution Factor:		1.0			1.0			1.0			1.0	
	Result	RL	MDL	Result	RL	MDL	Result	RL	MDL	Result	RL	MDL
ANALYTE	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Dichlorodifluoromethane (12)	2.4	0.049	0.0023	2.4	0.049	0.0023	2.4	0.049	0.0023	2.4	0.049	0.0023
Chloromethane	1.2	0.021	0.0050	1.2	0.021	0.0050	1.2	0.021	0.0050	1.2	0.021	0.0050
Vinyl Chloride	ND	0.013	0.0044	ND	0.013	0.0044	ND	0.013	0.0044	ND	0.013	0.0044
Chloroethane	ND	0.026	0.0051	0.018 J	0.026	0.0051	0.016 J	0.026	0.0051	0.012 J	0.026	0.0051
Trichlorofluoromethane (11)	1.1	0.11	0.0030	1.1	0.11	0.0030	1.1	0.11	0.0030	1.1	0.11	0.0030
1,1,2-Cl 1,2,2-F ethane (113)	0.65	0.15	0.0026	0.65	0.15	0.0026	0.65	0.15	0.0026	0.65	0.15	0.0026
1,1-Dichloroethene	ND	0.020	0.0031	ND	0.020	0.0031	ND	0.020	0.0031	ND	0.020	0.0031
Methylene Chloride	0.36	0.17	0.0077	0.36	0.17	0.0077	0.36	0.17	0.0077	0.37	0.17	0.0077
t-1,2-Dichloroethene	0.029 J	0.040	0.0035	0.011 J	0.040	0.0035	0.0055 J	0.040	0.0035	0.0059 J	0.040	0.0035
1,1-Dichloroethane	0.0050 J	0.040	0.0025	0.0033 J	0.040	0.0025	0.0047 J	0.040	0.0025	0.0035 J	0.040	0.0025
c-1,2-Dichloroethene	0.015 J	0.040	0.0039	0.012 J	0.040	0.0039	ND	0.040	0.0039	ND	0.040	0.0039
Chloroform	0.087	0.049	0.0030	0.087	0.049	0.0030	0.089	0.049	0.0030	0.11	0.049	0.0030
1,1,1-Trichloroethane	0.033 J	0.055	0.0024	0.026 J	0.055	0.0024	0.027 J	0.055	0.0024	0.024 J	0.055	0.0024
Carbon Tetrachloride	0.44	0.063	0.0021	0.43	0.063	0.0021	0.43	0.063	0.0021	0.43	0.063	0.0021
Benzene	5.2	0.16	0.018	1.8	0.16	0.018	0.45	0.16	0.018	0.44	0.16	0.018
1,2-Dichloroethane	0.062	0.040	0.0046	0.065	0.040	0.0046	0.065	0.040	0.0046	0.063	0.040	0.0046
Trichloroethene	0.099	0.054	0.0042	0.087	0.054	0.0042	0.073	0.054	0.0042	0.077	0.054	0.0042
1,2-Dichloropropane	0.027 J	0.092	0.0055	0.019 J	0.092	0.0055	0.018 J	0.092	0.0055	0.019 J	0.092	0.0055
Bromodichloromethane	0.0043 J	0.067	0.0041	0.0046 J	0.067	0.0041	ND	0.067	0.0041	0.0074 J	0.067	0.0041
Toluene	1.4	0.075	0.0060	0.93	0.075	0.0060	0.74	0.075	0.0060	0.76	0.075	0.0060
t-1,3-Dichloropropene	0.0056 J	0.045	0.0044	ND	0.045	0.0044	ND	0.045	0.0044	ND	0.045	0.0044
1,1,2-Trichloroethane	ND	0.055	0.0087	ND	0.055	0.0087	ND	0.055	0.0087	ND	0.055	0.0087
Tetrachloroethene	0.55	0.068	0.033	0.51	0.068	0.033	0.50	0.068	0.033	0.12	0.068	0.033
1,2-Dibromoethane	0.0045 J	0.15	0.0028	ND	0.15	0.0028	ND	0.15	0.0028	ND	0.15	0.0028
Ethylbenzene	0.19	0.087	0.0030	0.15	0.087	0.0030	0.15	0.087	0.0030	0.15	0.087	0.0030
p,&m-Xylene	0.64	0.087	0.0085	0.58	0.087	0.0085	0.52	0.087	0.0085	0.56	0.087	0.0085
o-Xylene	0.32	0.087	0.0056	0.29	0.087	0.0056	0.22	0.087	0.0056	0.24	0.087	0.0056
Styrene	0.20	0.085	0.0062	0.13	0.085	0.0062	0.092	0.085	0.0062	0.073 J	0.085	0.0062
1,1,2,2-Tetrachloroethane	ND	0.14	0.0012	ND	0.14	0.0012	ND	0.14	0.0012	ND	0.14	0.0012

MDL = Method Detection Limit

ND= Not Detected (below MDL)

RL = Reporting Limit

J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By:

**Operations Manager** 

Date\_5-5-13

The cover letter is an integral part of this analytical report

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E042310

Client:

Fero Engineering

Attn:

John Petersen

Project Name:

**Continental Heat Treating** 

Project No.: Date Received: 10-758 04/23/13

Matrix:

Air

Reporting Units: ug/m3

### EPA Method TO15 SIM

Lab No.:	METH	OD BLA	NK								
Client Sample I.D.:		-									
Date Sampled:		-									
Date Analyzed:	0	4/23/13									
QC Batch No.:	1304	123MS2A	11								
Analyst Initials:		DT									
Dilution Factor:		1.0									
ANALYTE	Result ug/m3	RL ug/m3	MDL ug/m3								
Dichlorodifluoromethane (12)	0.0077 J	0.049	0.0023								
Chloromethane	0.0057 J	0.021	0.0050								
Vinyl Chloride	ND	0.013	0.0044								
Chloroethane	ND	0.026	0.0051								
Trichlorofluoromethane (11)	ND	0.11	0.0030								
1,1,2-Cl 1,2,2-F ethane (113)	ND	0.15	0.0026								
1,1-Dichloroethene	ND	0.020	0.0031								
Methylene Chloride	0.061 J	0.17	0.0077								
t-1,2-Dichloroethene	ND	0.040	0.0035								
1,1-Dichloroethane	ND	0.040	0.0025								
c-1,2-Dichloroethene	ND	0.040	0.0039								
Chloroform	ND	0.049	0.0030								
1,1,1-Trichloroethane	ND	0.055	0.0024								
Carbon Tetrachloride	ND	0.063	0.0021								
Benzene	0.037 J	0.16	0.018	7							
1,2-Dichloroethane	ND	0.040	0.0046						-		
Trichloroethene	ND	0.054	0.0042								
1,2-Dichloropropane	ND	0.092	0.0055					-			
Bromodichloromethane	ND	0.067	0.0041					-			
Toluene	0.011 J	0.075	0.0060			-	-	-	-		
t-1,3-Dichloropropene	ND	0.045	0.0044					-	-		
1,1,2-Trichloroethane	ND	0.055	0.0087					-	-		 -
Tetrachloroethene	0.036 J	0.068	0.033				-	-	-		 -
1,2-Dibromoethane	0.0030 J	0.15	0.0028		-	-		-	-		
Ethylbenzene	ND	0.087	0.0030		-	-	-	-	-		-
p,&m-Xylene	ND	0.087	0.0085		-	-	-	-	-		 
o-Xylene	ND	0.087	0.0056		-	-	-	-	-	-	-
Styrene	ND	0.085	0.0062		-	-	-	-	-		
1,1,2,2-Tetrachloroethane	ND	0.14	0.0012	<u> </u>							

MDL = Method Detection Limit

ND= Not Detected (below MDL)

RL = Reporting Limit

J = Trace amount. Analyte concentration between RL and MDL.

Reviewed/Approved By:

Operations Manager

Date 5-3-13

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E042310

QC Batch #: 130423MS2A1

Matrix: Air

FDA	Method	$TO_{-1}$	15	MIZ
- A	VICTOR	1 4 /- 1		

Lab No:	Method Blank		L	CS	LC	CSD					
Date Analyzed:	04/23/13		04/2	23/13	04/2	23/13					
Data File ID:	23APR006.D		23API	R003.D	23AP	R004.D					
Analyst Initials:	DT		D	T	П	T					
Dilution Factor:	1.0		1	.0	1	.0			Limits		
ANALYTE	Result pptv	Spike Amount	Result pptv	% Rec	Result pptv	% Rec	RPD	Low %Rec	High %Rec	Max. RPD	Pass/ Fail
Vinyl Chloride	0.0	500	501	100	502	100	0.3	70	130	30	Pass
1,1-Dichloroethene	0.0	500	550	110	535	107	2.8	70	130	30	Pass
1,1,1-Trichloroethane	0.0	500	429	86	421	84	1.8	70	130	30	Pass
Benzene	11.6	500	534	107	543	109	1.6	70	130	30	Pass
Trichloroethene	0.5	500	614	123	627	125	2.0	70	130	30	Pass
Tetrachloroethene	5.3	500	614	123	633	127	3.1	70	130	30	Pass

Reviewed/Approved By:

Mark Johnson **Operations Manager** 

The cover letter is an integral part of this analytical report

Date: 5-3-13